MRI STUDY FINDS CORTICAL THINNING IN SUBJECTS WITH BIPOLAR DISORDER

A neuroimaging study from the Mood Disorders Research Program (MDRP) of 65 people (34 with bipolar disorder and 31 healthy control subjects) provides compelling evidence of cortical thinning in the brains of persons with bipolar disorder.

Study author and neuroscience graduate student Lara Foland-Ross of the MDRP found decreases in cortical thickness in both left and right brain hemispheres of patients with bipolar disorder when compared with healthy control subjects. Specifically, thinning was observed in regions of the brain critical to modulating attention, motivation and emotion. These regions are the anterior cingulate cortex and ventrolateral and ventromedial prefrontal cortex (PFC). The study also revealed that subjects with a history of psychosis had significantly greater thinning in the PFC than subjects without a history of psychosis.

While previous studies have attempted similar measurements, prior results have been inconclusive. This may be due to the use of traditional brain imaging volumetric methods, which can be insensitive to subtle neuroanatomic changes, and to the inclusion of study subjects undergoing lithium treatment, which is believed to thinning, page 5

WELCOME, DR. GEORGE BARTZOKIS

George Bartzokis, MD, has recently joined the MDRP. A Professor in the Department of Psychiatry in the David Geffen School of Medicine at UCLA, Dr. Bartzokis is a member of the UCLA Brain Research Institute and on the faculty at the Laboratory of Neuroimaging. He graduated cum laude from Harvard University and earned his medical degree at Yale School of Medicine. He completed his internship at UCLA/West Los Angeles VA Medical Center and his residency in Psychiatry at UCLA Neuropsychiatric Institute before completing a Schizophrenia Research Fellowship in brain imaging in the Department of Psychology.

Dr. Bartzokis has a long-standing interest and research career in using brain imaging to assess processes involved in brain development and degeneration. He has studied this in schizophrenia and Alzheimer’s disease. He will now apply these skills to patients with mood disorders. His ultimate goal is to use brain imaging in conjunction with genetic and cognitive biomarkers to better identify risk factors associated with brain derangements at very early stages when treatment interventions can arrest and possibly reverse the progression of disease trajectories.
I

n these difficult eco-

nomic times, I am again

reminded of the impor-

tant role our donors play in

supporting our medical re-

search.

As the state of Cali-

fornia cuts budgets and the

University furloughs staff,

private donations provide

financial stability that en-

sures our work at the MDRP

continues. And the need for

our research has never been
greater: Recently, the World
Health Organization reported
depression is now the
leading cause of disability
worldwide, affecting more
than 120 million people.
Additionally, the various
forms of bipolar disorder
that are increasingly recog-
nized affect 3-5% of persons
worldwide. And mental
health disorders affect up to
20% of children and adoles-
cents globally.

The Program’s re-

search studies, among other

things, seek to identify the
most effective treatments
for bipolar disorder and de-

pression. With the recent
addition to our team of Dr.
George Bartokis, a leading
researcher in neuroimaging,
the establishment of a new
pediatric and adolescent
clinic at UCLA, and the col-

laboration with Dr. Patricia
Walshaw, a clinical child
psychologist who works in
the child bipolar clinic, our
Program is poised to ad-
dress brain development in
persons with mood disorders
throughout the lifespan. This
is in addition to our contin-

uing research on mood disor-
ders as they relate to
women’s life stages.

Currently, our areas
of inquiry include neuro-

imaging studies designed to
identify structural and func-
tional brain abnormalities
associated with bipolar dis-
order; predictors of postpart-

um depression; differential
diagnosis of Attention Deficit
Disorder and Bipolar Disor-
der; and drug trials designed
to identify the safest, most
effective treatments for bi-

polar disorder. Our findings
are published in the field’s
leading journals, including
Archives of General Psychia-
try, American Journal of Psy-

chiatry, and Journal of Clini-
cal Psychiatry. In addition,
the Program’s researchers
are frequently invited to pre-

sent at national and interna-
tional conferences. And,
equally important, the re-

searchers who train with us
go on to share their expert-

ise at leading health institu-
tions. Over the past 15
years, the Program has nur-
tured talented scientists who
now teach, conduct re-

search, and practice medi-
cine at distinguished institu-
tions throughout the country
including the Mayo Clinic,
UT-Southwestern and Stan-
ford University.

Funding for our
work comes from public and
private grant providers, in-
cluding the National Insti-
tutes of Health and the Na-
tional Institutes of Mental
Health. We have been for-
unate to be federally funded
for the life of our program,
as federal grants are peer-
reviewed and represent an
honor to obtain.

In addition to these
grants, your gifts – of all
sizes – are a vital part of our
Program. As a donor, you
can designate specific pur-
poses for your gift, such as
investigating new treat-
ments, serving special popu-
lations, endowing Graduate
Student Fellowships, or fa-
cilitating innovative research
by mid-career faculty. You
can be certain that however
your gift is utilized, you are
supporting research that has
the potential to transform –
and to save – lives.

Everyone at UCLA’s
Mood Disorders Research
Program is proud to be at
the forefront of research in
the field of mood disorders.

And, as always, we
recognize that we can’t do it
without you!

ABOUT THE DIRECTOR

Dr. Lori Altshuler is a Profes-
sor of Psychiatry in the UCLA
Department of Psychiatry and
Biobehavioral Sciences and
holds the Julia S. Gouw Chair
in Mood Disorders.

Dr. Altshuler received
her bachelor and M.D. degrees
from Cornell University and
completed her psychiatry resi-
dency at the UCLA Neuropsych-
chiatric Institute and Hospital
and the Brentwood VA Medical
Center. She completed a two-
year fellowship at the Biological
Psychiatry Branch of the Na-
tional Institute of Mental
Health.

In 1989, she joined
UCLA and in her first year on
faculty received the UCLA Neu-
ropsychiatric Hospital Junior
Faculty Distinguished Teaching
Award.

Dr. Altshuler has con-
tinued as an active teacher and
mentor, and has been the re-
cipient of numerous awards,
including the UCLA Depart-
ment of Psychiatry Outstanding
Research Mentor Award in 1994
and again in 2004.

Her VA Bipolar Disor-
ders Clinic was designated a
Center of Excellence in 1996
for outstanding care.

She was elected by
her peers for inclusion in Best
Doctors in America® multiple
years including 2007 and
2008.

She has received the
Gerald L. Klerman Distingui-
shed Investigator Award
from the Depression and Bi-
polar Support Alliance (2005),
the National Nola Maddox Falcone
Prize from NARSAD for Out-
standing Achievement in Affect-
ive Disorders Research (2006)
and the Outstanding Achieve-
m ent award from the Southern
California Psychiatric Society
(2008).
TREATMENT UPDATE

Recently FDA-Approved for Unipolar Depression:
- Desvenlafaxine (Pristiq)
- Transcranial Magnetic Stimulation (TMS)
- Vagal Nerve Stimulation (VNS)

Only Two Antidepressants FDA-Approved for Bipolar Depression:
- Olanzapine-Fluoxetine Combination (OFC) (Symbyax)
- Quetiapine (Seroquel)

Agent FDA-Approved for Maintenance Treatment of Bipolar Disorder:
- Lithium
- Lamotrigine (Lamictil) (depression prevention)
- Olanzapine (Zyprexa)
- Quetiapine (Seroquel)
- Aripiprazole (Abilify)
- Risperidone (Risperdal Consta) (long-acting injectable) (adjunctive and monotherapy)

MAKING THE DIAGNOSIS: JUVENILE BIPOLAR DISORDER OR ADHD?

Among the most perplexing diagnostic puzzles facing pediatric clinicians is differentiating childhood bipolar disorder from a similar (and frequently comorbid) disorder, Attention Deficit/Hyperactivity Disorder (ADHD).

With significant overlap of symptoms and behavioral presentations in children, the two disorders are easily confused. But correct diagnosis is crucial, as typical treatments for ADHD can exacerbate the symptoms of bipolar disorder. Likewise, the adverse effects associated with some medications used to treat bipolar disorder pose unnecessary risks to children without the illness.

Currently, both bipolar disorder and ADHD are diagnosed through a clinical interview and self-report checklists. Reliance on these subjective measures can make it difficult to distinguish between the two disorders but, unfortunately, there is no objective measurement in use. To date, only limited research examines the neurodevelopmental underpinnings of juvenile bipolar disorder.

With the help of a private grant from the State Family Fund, Dr. Patricia Walshaw is leading a clinical study – one of only a handful in the country – into the neurocognitive and neurobiological characteristics of juvenile bipolar disorder, particularly in comparison to ADHD.

A clinical child psychologist with a background in neuropsychology and neuroscience research, Dr. Walshaw has been collaborating with the MDRP since 2008. Her research uses neuropsychological, electroencephalogram (EEG), and neuroimaging (structural and functional magnetic resonance imaging) techniques to examine brain function during a variety of cognitive tasks.

Although Dr. Walshaw is still collecting data, preliminary findings from the EEG data look promising and were presented at the American Academy of Child and Adolescent Psychiatry (AACAP) annual meeting in October. These data indicate that there may be markers for bipolar disorder that diverge from ADHD when children are resting with their eyes closed.

If confirmed, Dr. Walshaw’s findings could help unlock the puzzle of differential diagnosis and ultimately lead to improved treatment of juvenile bipolar disorder.

Dr. Walshaw will continue collecting data through 2010 and plans to present additional findings in the near future.

GRADUATE SCHOLARS FUNDED BY MSST FOUNDATION RESEARCH GRANT

Thanks to a generous grant from the MSST Foundation, two graduate students, Salvatore “Sam” Torrisi and Yilan “Autumn” Yang, will be able to pursue doctoral research in mood disorders as part of the MDRP.

Mr. Torrisi, who earned an MFA in computer music composition from California Institute of the Arts in 2003 and an MA in Applied Linguistics from UCLA in 2007, is researching functional and effective connectivity of brain activity of different mood states during tasks of emotion regulation.

Ms. Yang, a native of China who received her undergraduate degree in Biological Sciences from Tsinghua University, will conduct research on cortical pattern matching (CPM), diffusion tensor imaging (DTI) and DTI-tractography in bipolar disorder.

A valued partner of the Jane and Terry Semel Institute for Neuroscience and Human Behavior, the MSST Foundation is a private organization administered by Jungian analyst Nancy Furlotti.

We are grateful for their support.
When her 22-year-old daughter was diagnosed with bipolar disorder, Lucia Kagan knew almost nothing about mental illness, but she was determined to educate herself about the disorder and find the best available treatments. And now, years later, through her creation of a charitable gift annuity, Lucia is making it possible for the MDRP to educate others as well.

Lucia’s journey began when her daughter developed her first manic episode soon after college. Her daughter was working and taking classes in preparation to attend graduate school when her behavior became increasingly erratic and resulted in a hospitalization. She was diagnosed with bipolar disorder.

Lucia’s daughter was discharged from the hospital, but she was not well and was not able to care for herself. Just 22, she was handed a bag of medications and sent out on her own. This was extremely distressing for Lucia, as it was her first awareness of how people with mental illness could be one step away from homelessness, as they are often discharged in a disorganized state of mind.

Lucia brought her daughter home, but her daughter was “in denial” about having an illness that required taking medication on a daily basis.

At age 23 she stopped taking her medication and was soon re-hospitalized, having a psychotic mania. During this hospitalization, Lucia’s daughter recognized and accepted that she had a disorder that required medication. Since this hospitalization, she has been compliant with her medication and has not been hospitalized since. Today, at 35, she is married and working, as is common with patients who receive appropriate treatment for their illness.

The Kagan family’s story is an excellent example of the challenges that frequently accompany bipolar disorder, and of the positive results that are possible with treatment. It is also a story of persistence and resourcefulness — throughout her daughter’s diagnosis and treatment, Lucia actively sought expert opinions to guide her family’s choices. When she heard about the Mood Disorders Research Program at UCLA, she attended several meetings and became involved. Lucia’s experience with her daughter made her aware of how important it is for clinicians to have a sound knowledge base about the symptoms of bipolar disorder so that it can be recognized early and treated. In 2005, Lucia established a charitable gift annuity to fund a fellowship position in the UCLA MDRP. The goal of the annuity is 1) to provide additional training to young physicians or scientists to increase their knowledge about mood disorders and 2) to encourage research to find a cure or better treatments for persons with mood disorders.

Lucia was born in Milan, Italy. In 1972, she moved to the United States with her husband, where they had two children. She raised her daughter, now 35, and her son, 34, in Brentwood, California.

Lucia is an active member of the UCLA community. She is involved in the Friends of the Semel Institute, is a member of the Executive Advisory Board of the MDRP, and is a volunteer at UCLA Medical Center.

We are grateful for Lucia’s vision in establishing the annuity, and for her involvement in the Executive Advisory Board.
Pregnancy, usually a time of optimism and excitement, is also a time when many women are vulnerable to depression.

Up to 20% of pregnant women will experience depressive symptoms, and many will face the difficult decision of whether to treat their symptoms with antidepressant medication.

Doctors know that depressed women who discontinue medication during pregnancy suffer relapse rates as high as 68%. And some studies have shown that depressed mothers have difficulty bonding with their infants, which may lead to development delays. This would lead some doctors to highly encourage women to remain on antidepressants during their pregnancies to prevent relapse. But little is known about the potentially harmful effects antidepressants might have on fetal development. Few studies have been done, and published reports offer contradictory conclusions. That leaves women and their doctors with the difficult task of weighing threats to maternal mental health and parent-child bonding against concerns for the developing fetus.

A recent study by Dr. Rita Suri of the MDRP adds much-needed information to the field – and offers encouraging insights for women of child-bearing age who are diagnosed with depression. In her study of 59 infants, Dr. Suri found that antidepressant use during pregnancy does not appear to have major adverse effects on infant behavioral development. Suri compared the births and post-natal development of three groups of infants – those born to unmedicated mothers suffering depressive symptoms; those born to mothers who maintained antidepressant use throughout pregnancy; and those born to non-depressed control subjects. Suri found that the infants whose mothers chose to continue medication were more likely to be born preterm, but their post-natal neurobehavioral development was not significantly impaired. In tests performed within one week of birth and again six to eight weeks later, Suri found no significant developmental differences in infants whose mothers were treated with antidepressants.

Using the Brazelton Neonatal Behavioral Assessment Scale, Suri’s team measured infant development in seven areas and found that infants from all three groups received similar scores, suggesting that antidepressant use does not appear to have major adverse effects on infant neurobehavioral development.

While much research remains to be done on the long-term effect of maternal use of antidepressants during pregnancy, Suri’s study makes an important and reassuring contribution to this growing field of inquiry.
How You Can Help

Founded in 1995, the UCLA Mood Disorders Research Program at the David Geffen School of Medicine at UCLA is a non-profit program dedicated to research. Working in tandem with the Department of Psychiatry’s renowned Mood Disorders Clinic and Women’s Life Center, our researchers often work with patients in the clinics as well as in the community. Although we receive federal grant funding, private contributions are essential to our program’s health and growth in new directions. We thank our donors for their generous support. Individuals interested in making a donation to support the program are asked to make the check payable to The UCLA Foundation, designate the gift to MDRP in the memo line, and send it to:

UCLA Mood Disorders Research Program
300 UCLA Medical Plaza, Suite 1544
Box 696824
Los Angeles, CA 90095

Individuals interested in making a planned gift or gift of securities should contact Alan Han, Director of Development for Neuroscience at (310) 825-1546 or by email: ahan@support.ucla.edu.

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